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## (Australian Petty Patent)

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**DEODORISER**

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(56) Prior Art Documents  
**AU 12819/92 A61L 9/12 9/01**  
**AU 89878/91 A61L 9/12 B65D 83/00**  
**AU 13064/83 A61L 9/12 B65D 21/02**

## (57) Claim

1. A dispenser for vaporisable aromatic and/or medicinal substances which comprises:

- (1) a closed container generally in the form of a parallelepiped having four sides and a front and back;
- (2) an absorbent wick-like mechanism, wherein a wick may be caused to rise and fall into a reservoir for the aromatic and/or medicinal substances without the necessity to touch the wick;
- (3) a fan for dragging air into the container, the fan being placed in the front of the container, the air from the fan blowing over the wick when the wick is in its raised condition; and
- (4) a filter for removing unwanted substances from the stream of air ejected from the container;

wherein (a) the power of the fan motor and the dimensions of the fan; (b) the internal dimensions of the container; and (c) the air-passing characteristics of the filter are so selected as to provide selected, controlled amounts of aromatic and/or medicinal substances.

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ORIGINAL

COMPLETE SPECIFICATION

PETTY PATENT

Invention Title: DEODORISER

The following statement is a full description of this invention, including the best method of performing it known to me:



**FIELD OF THE INVENTION:** An air filtered deodoriser designed to disperse safely into the air therapeutic solutions after the air which passes over and through the solution has been effectively filtered.

**BACKGROUND OF THE INVENTION:** Similar air filters and deodorisers are known but there is a requirement for such methods to be carried out safely whereby the solution is not touched or handled because such solutions or compounds may be poisonous if handled yet are safe in the form of a vapour and in this form can be of therapeutic benefit. The device is designed with an enclosed fan, filter and absorbent wick-like mechanism to be completely safe and effective and can be controlled by calculation.

The objects of the invention are to promote an aromatic effect by fan forcing a therapeutic solution or substance, eg. essential oils, into a confined space such as a room, office, factory, motor vehicle and allowing the air to be adequately filtered.

The main feature of this invention is that of raising the wick or similar absorbable material in a safe, effective manner from an approved poison bottle or appropriate container using a childproof lid.

The purpose of the invention is to provide clean, filtered air with added fragrance including essential oils like eucalyptus for therapeutic and medicinal benefits by incorporating the wick and/or impregnated wick-like cotton, wool, nylon or product similar in shape and size to one of the three or more filters which will rise above the neck of the container without the necessity of touching the solution by hand.

Some features of this invention are:



1. It provides a medicinal aromatic benefit by fan-forcing clean, filtered air over and through essential oils or like products.
2. The wick or appropriate material and mechanism is specifically designed to safely operate from a 'poison' bottle with a specifically approved childproof cap.
3. In the operation of the fan forced filter the fingers or hands do not come in contact with the solution, essential oil or other contents within the container. It is not necessary to have a childproof lid or a poison bottle, such is only necessary if a poison or other harmful material is being used.

The essential aspect of the invention is the manner in which the wick rises and falls into a container or poison bottle and the childproof cap which is necessary under the relevant law. The invention is designed in such a way to avoid touching the poison or solution by hand or other parts of the body and to ensure the lid closes completely when not required for aromatic and other purposes.

**BRIEF SUMMARY OF THE INVENTION:** This invention provides a dispenser for vaporisable aromatic and/or medicinal substances which comprises:

- (1) a closed container generally in the form of a parallelepiped having four sides and a front and back;
- (2) an absorbent wick-like mechanism, wherein a wick may be caused to rise and fall into a reservoir for the aromatic and/or medicinal substances without the necessity to touch the wick;
- (3) a fan for dragging air into the container, the fan being placed in the front of the container, the air from the fan blowing over the wick when the wick is in its raised condition; and
- (4) a filter for removing unwanted substances from the stream of air ejected from the container;

wherein (a) the power of the fan motor and the dimensions of the fan; (b) the internal dimensions of the container; and (c) the air-passing characteristics of the filter are so selected as to provide selected, controlled amounts of aromatic and/or medicinal substances.



**BRIEF DESCRIPTION OF THE DRAWINGS:**

Figure 1 shows an overview of the air filter with a protective fan covering, the filter box and the positioning of the handle (27) and feet (23).

Figure 2 shows the inside view including the hold case (18) for the container or poison bottle and also the fan (23).

Figure 2 (a) shows the back of the appliance including the fan (23). The removable front (29) allows for access to the bottle and wick but sealed sufficiently to prevent access by children to avoid injury by the poison or from the fan. The guard (30) is inserted between the fan and the bottle for safety reasons and to comply with Electrical Authority Standards.

Figures 3 shows the filter box and air vent for air to pass through the filter (20). The filter container can be attached by screwing (31) or being applied with double-sided adhesive or slid into an appropriate designed slot.

Figure 4 shows the position of the three filters. Such filtering system (34) is designed to be replaced when deemed inappropriate for further use.



Figure 5 shows the wick within the container and the means of raising the wick without touching the poison by hand and the fraying of the wick.

Figure 6 shows the approved childproof cap necessary on poison bottle.

Figure 7 shows the childproof cap in position when closed.

Figure 8 shows the wick raised the prescribed distance above the head of the bottle and the mechanism to raise the wick without touching the solution with the hand.

Figure 9 shows the lifting pad and the tag attached to the wick.

#### **DETAILED DESCRIPTION OF THE INVENTION:**

The invention is more specifically designed for threaded (5) poison bottles, 25ml, 50ml, 100ml, 200ml and other similar bottles with accepted childproof lids necessary by law. It is not essential that the 'wick' be used specifically for poison bottles as other containers can implement the same invention. However, the prime purpose of the invention is to avoid touching the solution by hand. The invention relates to a manner in which the ease of lifting a wick (1) can be achieved without the necessity of touching the wick by hand and for it to remain at an appropriate height (15) above the neck of the container and to be re-inserted in the container and be fully closed by the use of an appropriate cap.

The wick may be glued or inbuilt within the lifting pad (3). The wick is attached to the washer-type pad by either gluing, stapling (7), heating or moulding as part of the wick (refer Figure 9). The wick is primarily used for aromatic purposes and is part of the overall purpose of the fan-forced filter to provide clean, filtered air with added fragrance including essential oils such as eucalyptus for therapeutic and medicinal benefit.



A flat circular lifting pad or washer allows the child-proof cap (8) to close over the wick (9) when it is not raised for the purpose of providing aromatic odours and can be securely closed when necessary as a safeguard. Further adaptation is that of providing a tag (10) attached to the pad or washer no wider in diameter than that of the lifting pad designed for further ease of lifting the wick or absorbent material (1). This may be glued, moulded or stapled to the lifting pad (11). This washer and tag may be moulded from polypropylene or polyurethane, stainless steel or other similar substance that is not reactive with a poison like eucalyptus. It is not proposed that acid or other similar solvent be used. However, such could be used in this invention because hands or fingers will not make contact with the solution. The diameter of the circular, flat lifting pad (washer) is precisely that of the outside diameter (11a) of the neck of the bottle or container which may be of glass, plastic or any other non-volatile material such as polyurethane (10).

Preferred optional features can include the type of material used as a wick and also the type of material used as a lifting pad (11). The wick may be of cotton, wool and even filter material, or nylon rope but must always be the same diameter (12) as that of the opening head of the poison bottle or any other container of a screw top nature (13) or press-on nature. Referring to Figures: 1, 2, 3, 4, 5, 6, 7, and 8 and note the manufacture of the present childproof cap and poison containers (6). Other preferred optional features include nylon, wool or combination of these or any other material that is absorbent in nature and so designed to sit neatly and firmly within the neck of the container (12) in such a way to hold firmly by expansion of the solution in the container or bottle and frayed sufficiently at the bottom (13) to remain on the bottom of the container when lifted the required distance above the neck of the bottle.

The invention provides (14) a method of lifting a wick which may contain a hazardous substance without touching the fluid or contents (13) directly with the hands so as to avoid burning or poisoning by the fluid within the poison container or any other bottle.



A further option is that the bottle or container does not necessarily need to be circular since the invention can be modified for any shape container whether it be square or rectangular. Lids, tops or caps can be designed to complement the invention whereby the wick can move freely up and down the container and the lifting pad sits neatly within the lid, cap or top.

The lifting device (16) for raising the wick must not be reactive to poisons or hazardous material within the bottle, for example, polyurethane or stainless steel or any other product that is not affected by the poison or hazardous material and will ensure that it will sit within the approved childproof screw cap (6).

Further adaptation allows the wick to rise above the height of the bottle with the use of a diaphragm that permits the wick and its support mechanism to rise or fall on the turning on or off of the fan which will fan force the essential oil or other appropriate product allowing it to enter the atmosphere for either medicinal purpose or disinfecting reasons or other appropriate uses of essential oils for aromatic reasons.

In the design of this invention, it is necessary to provide a shield to protect fingers or hands from touching the fan (17) used specifically for taking in and expelling air over the wick which is raised from the bottle or the adequate container (18) inserted within a frame within the case (18).

Inbuilt within this invention is a three-stage carbon filter (2) (refer figure 3):

- (a) one for purifying heavy dust particles;
- (b) one for purifying medium dust particles; and



- (c) one for purifying fine dust particles.

These can be electrostatically treated if necessary (refer Figure 4)

As part of this invention, essential oils or appropriate medicinal material can be impregnated into one or all of the carbon filters or an appropriate absorbent material inbuilt within the filter to provide an appropriate vapour into the atmosphere.

The use of this fan forced air filter will provide (21) a means of filtering an appropriate area in relation to the size of the fan and the area of the filters depending on the purpose required. Further, the fan (23) will force an essential oil or other appropriate liquid or element (22) into the atmosphere for medicinal purposes or other means as required. The material of the box or container will be such that it will not be affected (24) by liquids appropriate to the use of the invention which prime purpose is to provide an aromatic effect (25) into the atmosphere and successfully filter the air (26).

An appropriate carrying handle (27) and feet (28) are necessary to stabilise the appliance. A removable front (29) allows access to the bottle and wick but is sealed sufficiently to prevent access by children to avoid injury from the poison or by the fan. A guard (3) is inserted between the fan and the bottle for safety reasons (31) and to comply with electrical authority standards. The filter container is attached by screwing (32) or being applied by a double-sided adhesive tape or slid into an appropriately designed slot (33). Such filtering (34) system is designed to be replaced when deemed to be inappropriate for further use - on average about once every three to six months. The container (35) holding the appropriate liquid is also replaceable, due to evaporation and use, every three to six months.

An absorbent material may be added to the filter, such as a cotton like wick material, nylon, wool or any other appropriate absorbent material, that can absorb the solution



similar to that described previously (Figures 5 and 9) which when impregnated will allow air to pass over and/or through to provide an aroma and/or vapour which may operate in conjunction with Figures 5 and 9 or replace them.

The impregnated wick may be added to Figure 3 and Figure 4 and be of similar shape, hence providing an appropriate aroma and/or therapeutic benefit.

All parts of the invention are readily accessible by removing Phillip head type screws or other appropriate attachments (36).



**THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:**

1. A dispenser for vaporisable aromatic and/or medicinal substances which comprises:
  - (1) a closed container generally in the form of a parallelepiped having four sides and a front and back;
  - (2) an absorbent wick-like mechanism, wherein a wick may be caused to rise and fall into a reservoir for the aromatic and/or medicinal substances without the necessity to touch the wick;
  - (3) a fan for dragging air into the container, the fan being placed in the front of the container, the air from the fan blowing over the wick when the wick is in its raised condition; and
  - (4) a filter for removing unwanted substances from the stream of air ejected from the container;

wherein (a) the power of the fan motor and the dimensions of the fan: (b) the internal dimensions of the container; and (c) the air-passing characteristics of the filter are so selected as to provide selected, controlled amounts of aromatic and/or medicinal substances.

2. A dispenser as claimed in claim 1, wherein the container is operable to allow replenishment of the reservoir.
3. A dispenser as claimed in claim 1 or claim 2, wherein the wick is provided with lifting means made from inert material whereby the wick may be extended from the reservoir without the aromatic and/or medicinal substance affecting an operator's fingers.



Dated this 23rd day of August 1995

**RONALD ALFRED ROBERTS**

by his Patent Attorney

**JAMES MURRAY & COMPANY**



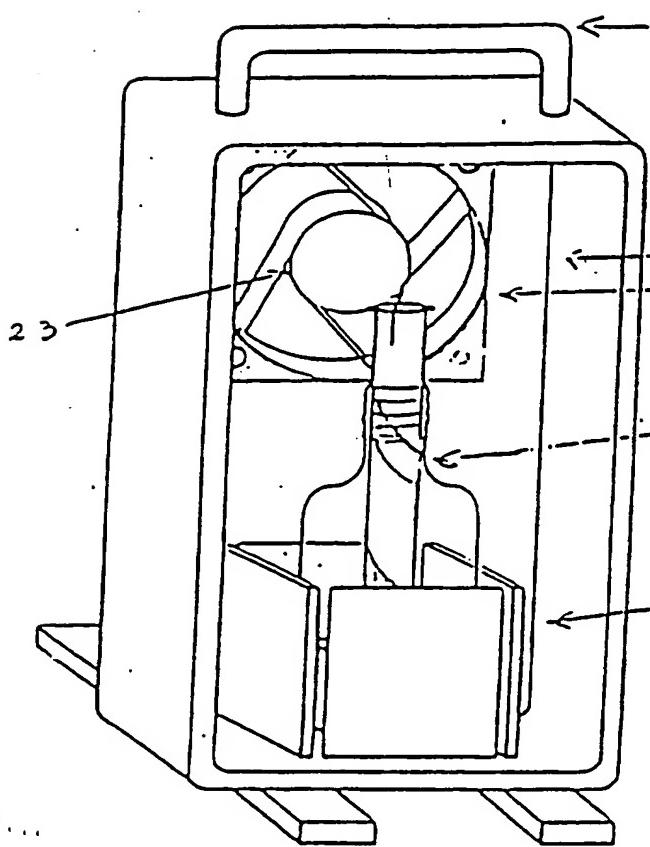
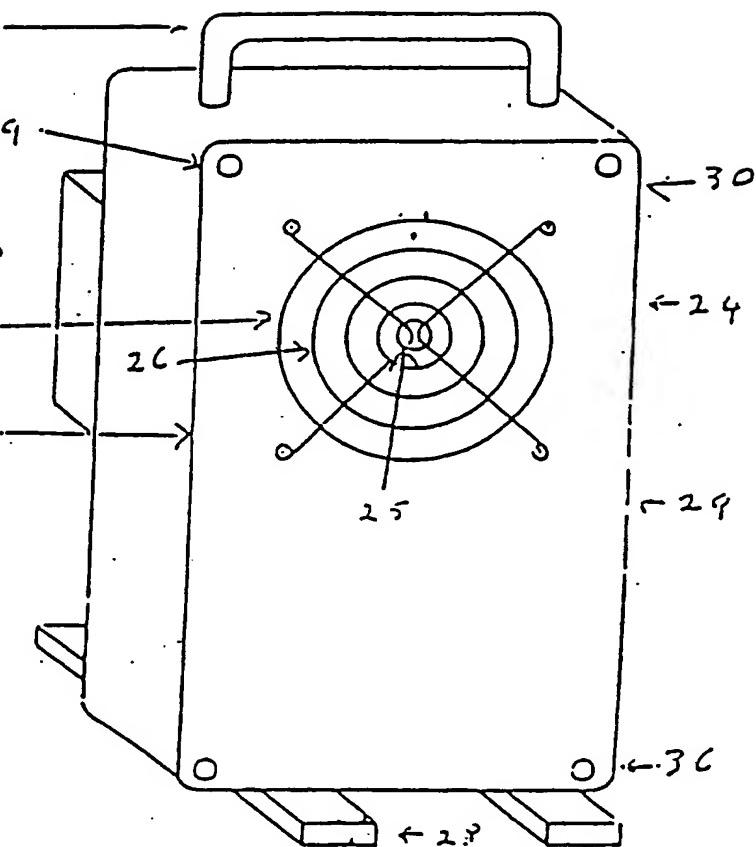
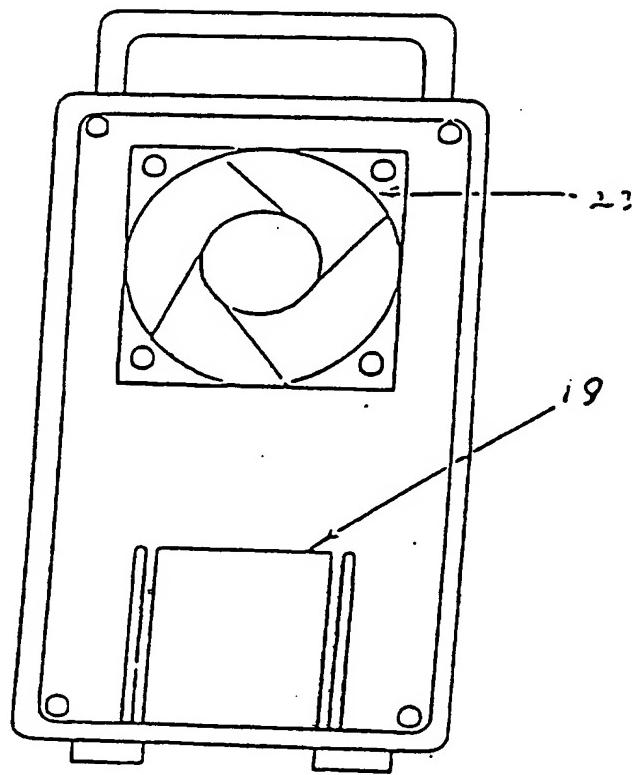
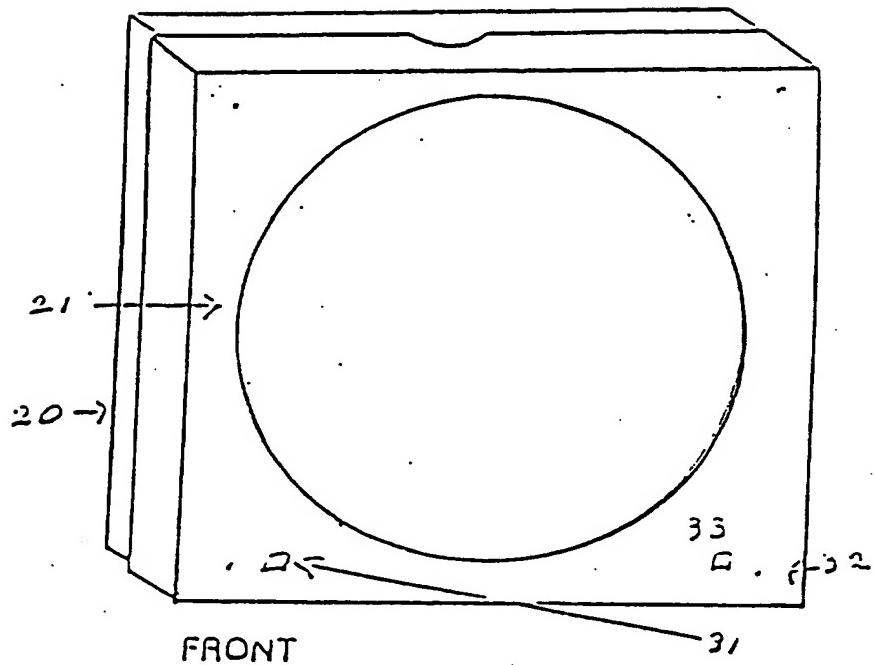
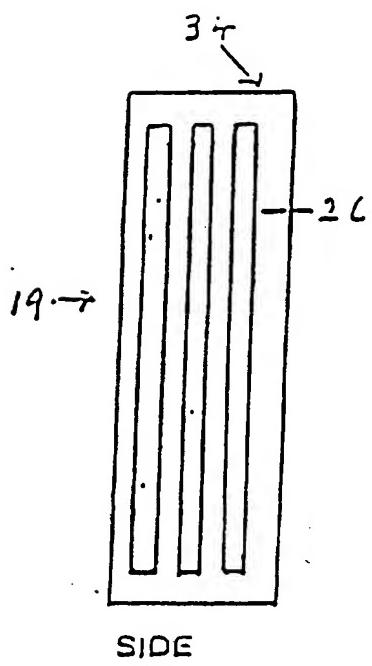
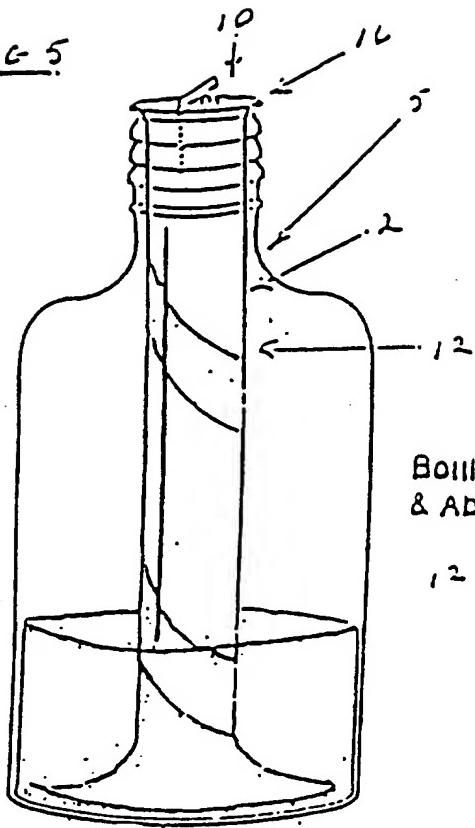
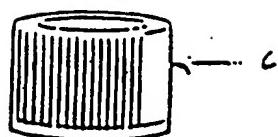
FIG. 2.FIG. 1FIG. 2a

FIG 3FIG 4

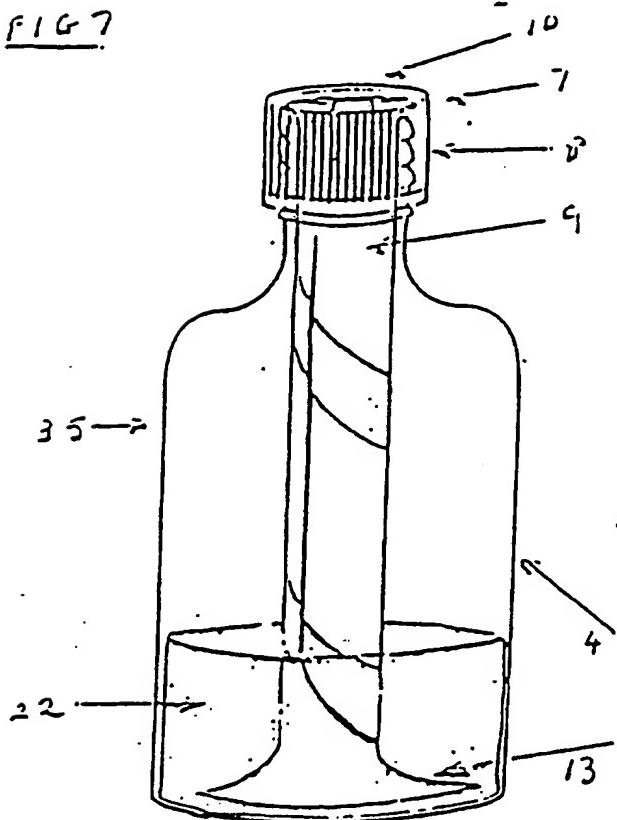
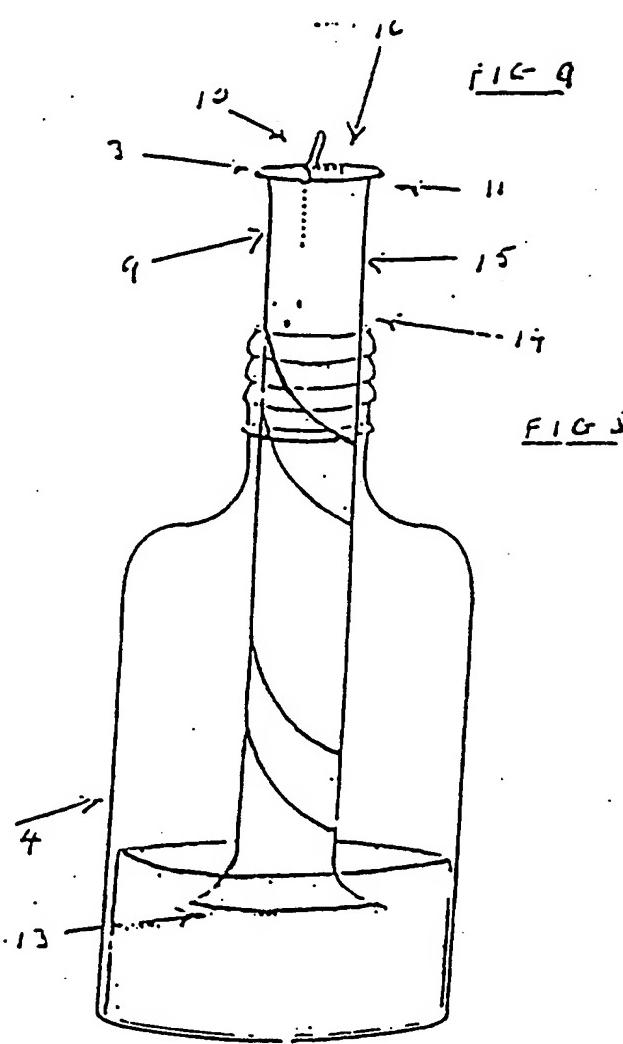
FILTER BOX  
Enclosed 3 Filters - Heavy  
- Medium  
- Light

Airomatic

FIG 5FIG 6

Child Proof Lid

Bottle with Aroma Substance  
& Absorbant Material

FIG 7FIG 8FIG 9

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